

DT07 Rec'd RPTO 1 4 FEB 2005

PATENT

PC/T #3

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
(Case No. 04-748)

In the Application of:

Fletcher et al.

Serial No.: 10/507,449

Filed: September 13, 2004

Title: Signal Processing and Method

Examiner: Not Assigned

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

TRANSMITTAL LETTER

In regard to the above identified application:

1. We are transmitting herewith the attached:

- Information Disclosure Statement
- Statement of Relevancy of a Foreign Language Reference
- Copy of Cited Non-U.S. Patent References
- Return Receipt Postcard

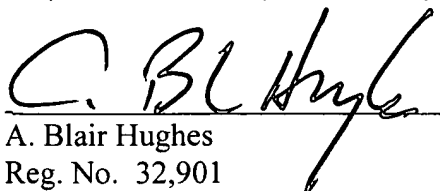
2. With respect to additional fees:

- Attached is a check in the amount of \$-0-

3. Please charge any additional fees or credit overpayment to Deposit Account No.13-2490. A duplicate copy of this sheet is enclosed.

4. CERTIFICATE OF MAILING UNDER 37 CFR § 1.8: The undersigned hereby certifies that this Transmittal Letter and the paper, as described in paragraph 1 hereinabove, are being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 10th day of February, 2005.

By :

  
A. Blair Hughes  
Reg. No. 32,901

McDONNELL BOEHNNEN,  
HULBERT & BERGHOFF LLP  
300 SOUTH WACKER DRIVE  
CHICAGO, ILLINOIS 60606  
TELEPHONE (312) 913-0001

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
(Case No. 04-748)

In the Application of:	)	
	)	
Fletcher et al.	)	
	)	
Serial No.: 10/507,449	)	
	)	
Filed: September 13, 2004	)	Examiner: Not Assigned
	)	
Title: Signal Processing and Method	)	

**Statement of Relevancy of a Foreign Language References**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

The JP 58201082 reference, which is cited in an Information Disclosure Statement by Application filed contemporaneously with this Statement is being supplied in a language other than in English. The relevancy of the foreign language reference is identified in the Search Report issued by the British Patent Office (a copy of which is attached hereto) which identifies the reference as an "X" reference relevant to claims 1, 4, 6 and 7 with meaning it is a "document indicating lack of novelty or inventive step".

The JP 80279780 reference, which is cited in an Information Disclosure Statement by Application filed contemporaneously with this Statement is being supplied in a language other than in English. The relevancy of the foreign language reference is identified in the Search Report

issued by the British Patent Office (a copy of which is attached hereto) which identifies the reference as an "A" reference with meaning it is a "document indicating technological background and/or state of the art".

The JP 10209734 reference, which is cited in an Information Disclosure Statement by Application filed contemporaneously with this Statement is being supplied in a language other than in English. The relevancy of the foreign language reference is identified in the Search Report issued by the British Patent Office (a copy of which is attached hereto) which identifies the reference as an "A" reference with meaning it is a "document indicating technological background and/or state of the art".

The JP 7038562 reference, which is cited in an Information Disclosure Statement by Application filed contemporaneously with this Statement is being supplied in a language other than in English. The relevancy of the foreign language reference is identified in the Search Report issued by the British Patent Office (a copy of which is attached hereto) which identifies the reference as an "A" reference with meaning it is a "document indicating technological background and/or state of the art".

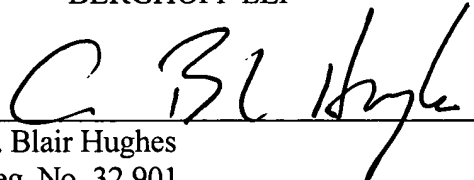
The JP 2002107439 reference, which is cited in an Information Disclosure Statement by Application filed contemporaneously with this Statement is being supplied in a language other than in English. The relevancy of the foreign language reference is identified in the Search Report issued by the British Patent Office (a copy of which is attached hereto) which identifies the reference as an "A" reference with meaning it is a "document indicating technological background and/or state of the art".

Respectfully submitted,

McDONNELL BOEHNEN HULBERT &  
BERGHOFF LLP

Dated: February 10, 2005

By:

  
A. Blair Hughes  
Reg. No. 32,901

Institute for form 1449/PTO

PTO/SB/08A (08-03)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

**Complete if Known**

# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

*(Use as many sheets as necessary)*

Sheet	1	of	3
-------	---	----	---

Application Number	10/507,449
Filing Date	September 13, 2004
First Named Inventor	Fletcher
Art Unit	Unknown
Examiner Name	Not Assigned
Attorney Docket Number	04-748

## U. S. PATENT DOCUMENTS

[illegible]

## FOREIGN PATENT DOCUMENTS

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> *Number <sup>4</sup> *Kind Code <sup>5</sup> (if known)				
		GB 2,188,782	10-7-87	STC PLC		
		GB 2,219,471	12-13-89	Cossor		
		GB 2,357,842	7-4-01	Furano		
		GB 2,372,378	8-21-02	Roke Manor		
		JP 580201082	11-22-83	Hitachi		
		JP 0802797980	10-22-96	Nippon		

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

*(Use as many sheets as necessary)*

**Complete if Known**

Application Number	10/507,449
Filing Date	September 13, 2004
First Named Inventor	Fletcher
Art Unit	Unknown
Examiner Name	Not Assigned
Attorney Docket Number	04-748

Sheet	2	of	3
-------	---	----	---

## U. S. PATENT DOCUMENTS

[illegible]

## FOREIGN PATENT DOCUMENTS

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)				
		JP 10209734	8-7-98	ATR Kankyo		
		JP 07038562	2-7-95	Mitsubishi		
		JP 2002107439	4-10-02	Toshiba		

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

*If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.*

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

**Complete if Known**

Application Number 10/507,449

Filing Date September 13, 2004

First Named Inventor Fletcher

Art Unit Unknown

Examiner Name Not Assigned

Attorney Docket Number 04-748

Sheet 3 of 3

**NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
		Scott, et al., "A Sparse Approach in Partially Adaptive Linearly Constrained Arrays", IEEE, pp. 541-544 (1994)	
		Godara, et al. "Application of Antenna Arrays to Mobile Communications, Part II: Beam-Forming and Direction of Arrival Considerations", IEEE, pp. 1195-1245 (1997)	
		Bell, et al., "Adaptive Nulling for Multiple Desired Signals Based on Signal Waveform Estimation", IEEE, pp. 919-923 (1992)	

Examiner  
SignatureDate  
Considered

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.